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| APPLICATION NO.               | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------|-------------|----------------------|---------------------|------------------|
| 09/809,178                    | 03/16/2001  | Toyohisa Oya         | 2870-0164P          | 5742             |
| 2292                          | 7590        | 07/28/2006           | EXAMINER            |                  |
| BIRCH STEWART KOLASCH & BIRCH |             |                      | CHEA, THORL         |                  |
| PO BOX 747                    |             |                      | ART UNIT            |                  |
| FALLS CHURCH, VA 22040-0747   |             |                      | PAPER NUMBER        |                  |
|                               |             |                      | 1752                |                  |

DATE MAILED: 07/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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|                              |                                      |                                   |  |
|------------------------------|--------------------------------------|-----------------------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>09/809,178 | <b>Applicant(s)</b><br>OYA ET AL. |  |
|                              | <b>Examiner</b><br>Thorl Chea        | <b>Art Unit</b><br>1752           |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 May 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 17, 23-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17 and 23-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This office action is responsive to the response on May 25, 2006; claims 17, 23-27 are pending in this instant application; claims 1-16, 18-22 have been canceled.

#### *Claim Rejections - 35 USC § 112*

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 17, 23-27, 30 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "an image can be formed by only a single sheet of the photothermographic material without any functional layer constituting a separate member" in claim 1 is considered as a negative limitation that was not disclosed in the specification as originally filed. "Any negative limitation of exclusionary proviso must have basis in the original disclosure. See *Ex parte Grasselli*, 231 USPQ 393 (Bd. App. 1983), *aff'd mem.*, 738 F.2d 453 (Fed. Cir. 1984).". The specification on page 91, lines 15-19 discloses "The photosensitive material of the invention is preferably bale to form an image by only a single sheet of the photosensitive material. That is, it is preferred that a functional layer necessary to form an image such as an image receiving layer does not constitute a separate member". The specification discloses therefore two layers an image providing layer and the image receiving layer . Both layers may coexist in the material, but they functionally separate. The specification fails to

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discloses the "single sheet of the photothermographic material without any functional layer constituting a separate member.".

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 17, 23-27, 30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claiming of "image can be formed by only a single sheet of the photothermographic material without any functional layer constituting a separate member" is unclear in view of the specification. The specification discloses an image receiving layer in the photothermographic material which coexist with the material useful in the formation an dye image. It is unclear whether the applicants intend to claim the material without this receiving layer or a different material that containing that receiving layer. The language "wherein R<sup>11</sup> is an alkyl group or an aryl group having up to 10 carbon atom is confusing whether it is intended to claim the alkyl group having up to 10 carbon atom or aryl group having up to 10 carbon atom or both alkyl group and aryl group having up to 10 carbons. The aryl group known in the art as group whose molecules have the ring structure characteristic of benzene, naphthalene, phenanthrene, anthracene, etc., i.e. either six carbon ring of the benzene or the condensed six-carbon ring of the other aromatic derivative. Therefore, the aryl group contains at least six-carbon ring. Therefore, the scope of protection sought of the group containing up to 10 carbons is unclear whether it is sought for the alkyl group of aryl group.

***Claim Rejections - 35 USC § 103***

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 17-22, 25-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over either Takeuchi (US Patent No. 5,851,745) or Nakamura et al ( US Patent 6,013,421) in view of the combination of Cerquone et al (Cerquone), EP 0762196 (EP'196) and Shoei et al (US Patent No. 5,064,753). Note to Takeuchi in the abstract, the exemplified compound in columns 5-20 compound I-1 to I-28, column 63, lines 49-63, especially the compound in column 11, I-21, I-22 which contains a quinazoline group and  $-(C=O)-NH-$  and alkyl and aryl group having more than one carbon atom; Nakamura in the abstract, exemplified compound in columns 7-33, compounds (1) to (90), and column 116, lines 57-67, column 117, lines 1-4, especially column 18, compounds (37), (43). Takeuchi and Nakamura disclose both photosensitive silver halide material and heat-development light sensitive material. In the case of a heat-development light sensitive material the light-sensitive silver halide emulsion may be used together with an organosilver salt oxidizing agent. Nakamura et al disclose the use of silver halide and reducible silver salt known as organosilver salt oxidizing agent silver salt of aliphatic acid in column 116, lines 15-67 and column 117, lines 1-4, and the use of binder in column 114, lines 23-30. Takeuchi discloses silver halide and organosilver salt in column 62-63, and binder in column 61, lines 11-19.

Cerquone discloses a photothermographic material, which contains a combination of the use of the color developer for dye forming coupler and the reducing agent for silver ion. Note for

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instant the sulfoamidophenol and the reducing agent, which react with silver salt oxidizing agent to produce desired dye image (column 6, compound A to D and lines 50-60). EP'196 discloses a phenol compound as reducing agent for silver salt. Note for instance compound A on page 2 and compound on page 3.

It would have been obvious to worker of ordinary skill in the art at the time the invention was made to use bisphenol reducing agent EP'196 as reducing agent for silver ions such as taught in Cerquone in combination with the color developer taught in either Takeuchi or Nakamura with an expectation of producing to a material having desired dye image.

8. Claims 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takeuchi or Nakamura et al (Nakamura) as applied to claims 17-22, 25-27 above, and further in view of JP10339934 (JP'934). The phthalazine compound has been known in JP'934 as to provide a photothermographic material with low fog and to improve photothermographic property. See US patent no. 6,146,822 which is equivalent to the JP'934 in column 5, compound (I). It would have been to the worker of ordinary skill in the art to incorporate the phthalazine derivative taught in JP'934 for same reason, and thereby provide a material as claimed.

#### ***Response to Amendment***

9. Applicant's arguments filed September May 25, 2006 have been fully considered but they are not persuasive for the reason set forth in the office action above. The applicants appear to argue the applied prior art individually while the rejection is based on the combination of the applied prior art. One cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

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The material taught in Takeuchi (US Patent No. 5,851,745) and Nakamura et al ( US Patent 6,013,421) are a single sheet photothermographic material and the image can be formed in the absence of using another separate member. The principal issue is whether the worker of ordinary skill in the art would have use a reducing agent for silver ion in the material containing a silver salt of an organic acid in combination with the color developing agent in the material of either Takeuchi (US Patent No. 5,851,745) and Nakamura et al ( US Patent 6,013,421). It has been known in Cerquone to use both reducing agent and the color developing agent in color material containing an organic silver salt and the coloring material since they produce a material with a desired image such as taught in Cerquone. The issue is not whether a single-sheet vs the two sheet material, but the issue is whether it would have been obvious to use reducing agent for silver ion in the material containing silver salt of an organic acid. This use of both reducing agent in combination with color developing agent to form silver image and color dye to provide a desired color image is known in Cerquone and therefore, the invention as claimed would have been found prima facie obvious to the worker of ordinary skill in the art.

The number up to 10 carbon is found obvious over the formula (II) taught in Nakamura et al in column 4, lines 60-68 which discloses the carbamoyl group has from 1-50 carbon atoms and Takeuchi in column 3, lines 20-40 which discloses carbamoyl group has from 1-50 carbon atoms.

### ***Conclusion***

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-1700.

tchea *tin*  
July 24, 2006

*Thorl Chea*  
Thorl Chea  
Primary Examiner  
Art Unit 1752